

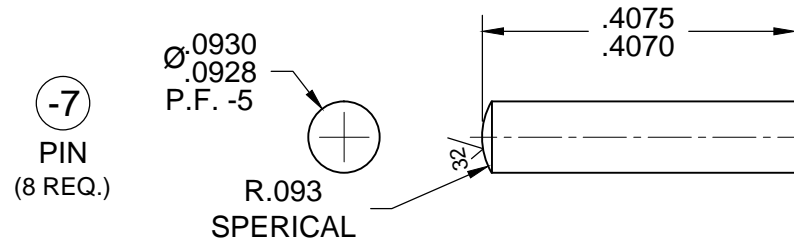
- NOTES
1. ¹²⁵ SURFACE FINISH UNLESS OTHER WISE SPECIFIED.

PILOT No.	ØD ₁₀ -.003 -.001	ØD ₁₁ -.004 -.002	MATERIAL
-5001	.1635	.1635	4140 Q&T Ø1/4 x 3-1/2
-5002	.1885	.1885	4140 Q&T Ø1/4 x 3-1/2
-5003	.1885	.2490	4140 Q&T Ø1/4 x 3-1/2
-5004	.1885	.3110	4140 Q&T Ø3/8 x 3-1/2
-5005	.2490	.2490	4140 Q&T Ø1/4 x 3-1/2
-5006	.2490	.3110	4140 Q&T Ø3/8 x 3-1/2
-5007	.2490	.3740	4140 Q&T Ø3/8 x 3-1/2
-5008	.2490	.4365	4140 Q&T Ø1/2 x 3-1/2
-5009	.2490	.4990	4140 Q&T Ø1/2 x 3-1/2
-5010	.3740	.3740	4140 Q&T Ø3/8 x 3-1/2
-5011	.3740	.4365	4140 Q&T Ø1/2 x 3-1/2
-5012	.3740	.4990	4140 Q&T Ø1/2 x 3-1/2
-5013	.3740	.5615	4140 Q&T Ø5/8 x 3-1/2
-5014	.3740	.6240	4140 Q&T Ø5/8 x 3-1/2
-5015	.3740	.8740	4140 Q&T Ø7/8 x 3-1/2
-5016	.2490	.6240	4140 Q&T Ø5/8 x 3-1/2
-5017	.3740	.7490	4140 Q&T Ø3/4 x 3-1/2
-5018	.4990	.4990	4140 Q&T Ø1/2 x 3-1/2
-5019	.4990	.5615	4140 Q&T Ø5/8 x 3-1/2
-5020	.4990	.6240	4140 Q&T Ø5/8 x 3-1/2
-5021	.4990	.7490	4140 Q&T Ø3/4 x 3-1/2

PILOT No.	ØD ₁₀ -.003 -.001	ØD ₁₁ -.004 -.002	MATERIAL
-5022	.4990	.7864	4140 Q&T Ø7/8 x 3-1/2
-5023	.4990	.8740	4140 Q&T Ø7/8 x 3-1/2
-5024	.4990	.9990	4140 Q&T Ø1 x 3-1/2
-5025	.4990	1.1801	4140 Q&T Ø1-1/4 x 3-1/2
-5026	.4990	1.0615	4140 Q&T Ø1-1/8 x 3-1/2
-5027	.2490	.8740	4140 Q&T Ø7/8 x 3-1/2
-5028	.4990	1.2490	4140 Q&T Ø1-1/4 x 3-1/2
-5029	.4990	1.3120	4140 Q&T Ø1-3/8 x 3-1/2
-5030	.4990	1.4370	4140 Q&T Ø1-1/2 x 3-1/2
-5031	.4990	1.4990	4140 Q&T Ø1-1/2 x 3-1/2
-5032	.4990	2.0615	4140 Q&T Ø2-1/8 x 3-1/2
-5033	.4990	2.3115	4140 Q&T Ø2-3/8 x 3-1/2
-5034	.4990	2.4990	4140 Q&T Ø2-1/2 x 3-1/2
-5035	.4990	2.7490	4140 Q&T Ø2-3/4 x 3-1/2
-5036	.4990	1.5615	4140 Q&T Ø1-5/8 x 3-1/2
-5037	.4990	1.8120	4140 Q&T Ø1-7/8 x 3-1/2
-5038	.2490	.7490	4140 Q&T Ø3/4 x 3-1/2
-5039	.4990	1.7490	4140 Q&T Ø1-3/4 x 3-1/2
-5040	.4990	1.8740	4140 Q&T Ø1-7/8 x 3-1/2
-5041	.1240	.1240	4140 Q&T Ø1/4 x 3-1/2
-5042	.2490	.4990	4140 Q&T Ø1/2 x 3-1/2

PILOT No.	ØD ₁₀ -.003 -.001	ØD ₁₁ -.004 -.002	MATERIAL
-5043	.2490	.4830	4140 Q&T Ø1/2 x 3-1/2
-5044	.3740	.8740	4140 Q&T Ø7/8 x 3-1/2
-5045	.4990	1.4240	4140 Q&T Ø1-1/2 x 3-1/2
-5046	.4990	1.5940	4140 Q&T Ø1-5/8 x 3-1/2
-5047	.4990	2.0990	4140 Q&T Ø2-1/8 x 3-1/2
-5048	.1240	.2490	4140 Q&T Ø1/4 x 3-1/2
-5049	.1885	.3115	4140 Q&T Ø3/8 x 3-1/2
-5050	.1885	.3740	4140 Q&T Ø3/8 x 3-1/2
-5051	.1885	.4210	4140 Q&T Ø1/2 x 3-1/2
-5052	.1885	.4310	4140 Q&T Ø1/2 x 3-1/2
-5053	.1885	.4365	4140 Q&T Ø1/2 x 3-1/2
-5054	.1885	.4990	4140 Q&T Ø1/2 x 3-1/2
-5055	.2490	.6840	4140 Q&T Ø3/4 x 3-1/2
-5056	.2490	.8040	4140 Q&T Ø7/8 x 3-1/2
-5057	.4990	1.3730	4140 Q&T Ø1-3/8 x 3-1/2
-5058	.8740	.8740	4140 Q&T Ø7/8 x 3-1/2
-5059	.2490	.3140	4140 Q&T Ø3/8 x 3-1/2
-5060	.1885	.2352	4140 Q&T Ø1/4 x 3-1/2
-5061	.1885	.1958	4140 Q&T Ø1/4 x 3-1/2
-5062	.4990	1.4365	4140 Q&T Ø1-1/2 x 3-1/2
-5063	.6240	1.0628	4140 Q&T Ø1-1/8 x 3-1/2

RED BARN MACHINE	
TITLE 8 POINT STAKING TOOL; RETAINING RING	
DWG NO. RBST(TOOL# SEE Pg.1 CHART)-(PILOT# SEE CHART)-9	REV 1A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 X ± .1	
FRACTIONS ± 1/32 ANGLES ± 5°	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 2-6-08
SHEET 6 of 6	

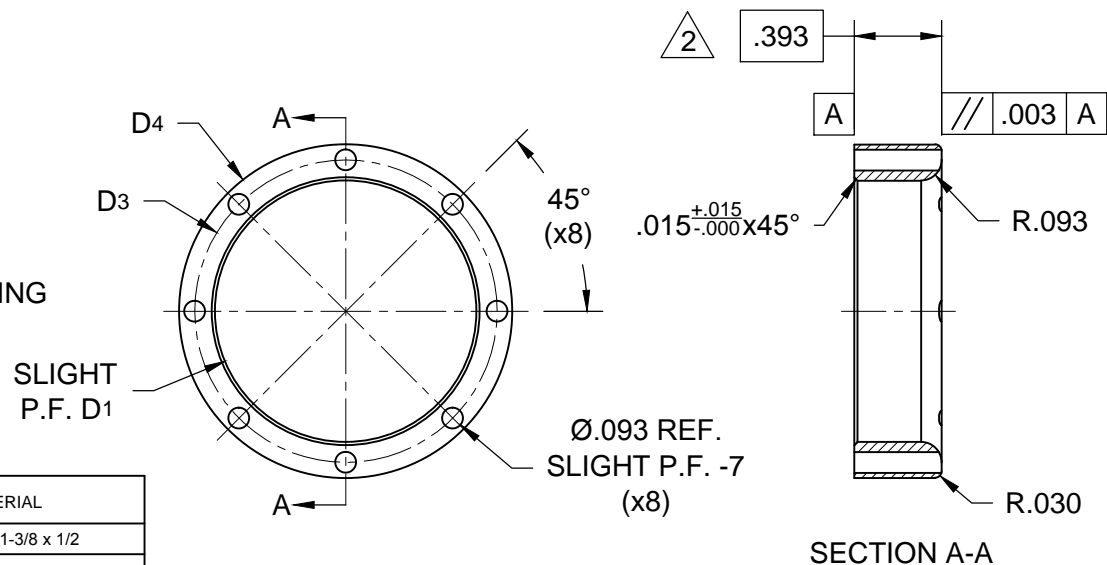


NOTES

1. SAME PINS FOR ALL TOOL NUMBERS.
2. BREAK ALL SHARP EDGES.

ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS	<div> <div> <div>RB</div> <div>RED BARN MACHINE</div> </div> </div>	
		W/O	-7	8	PINS	STEEL	Ø.093 MINUS GAUGE PIN MSC #89009302	<div> <div>TITLE</div> <div>8 POINT STAKING TOOL; PIN</div> </div>	
								<div> <div>DWG NO.</div> <div>RBST(TOOL# 'SEE Pg.1 CHART)-(PILOT# SEE Pg.1 CHART)-7</div> </div>	<div> <div>REV</div> <div>1A</div> </div>
								<div> <div>UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES</div> <div> <div>TOLERANCES ON:</div> <div> <div>DECIMALS</div> <div>.XXX ± .005</div> <div>.XX ± .01</div> <div>.X ± .1</div> </div> <div> <div>FRACTIONS ± 1/32</div> <div>ANGLES ± 5°</div> </div> </div> </div>	<div> <div>DRAWN BY:</div> <div>PERRITT</div> </div>
								<div> <div>APPROVED</div> <div> <div>HEAT TREAT</div> <div>FINISH SPEC</div> </div> </div>	<div> <div>USED ON BEARING</div> <div>SEE CHART Pg. 1</div> </div>
								<div> <div>UNLESS OTHERWISE SPECIFIED</div> <div>1. BREAK ALL SHARP EDGES</div> <div>.015 x 45° PR .015 R</div> <div>2. DIMENSIONAL LIMITS APPLY AFTER PLATING</div> </div>	
								<div> <div>SCALE</div> <div>NTS</div> </div>	<div> <div>DATE</div> <div>2-6-08</div> </div>
								<div> <div>SHEET</div> <div>5 of 6</div> </div>	

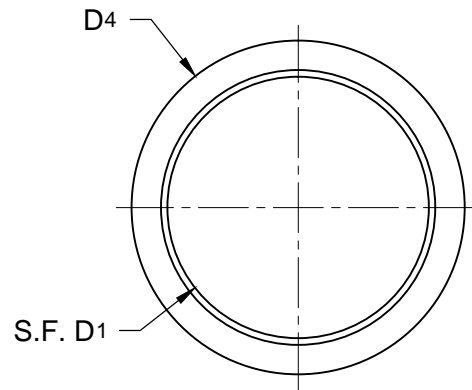
(-5)
RETAINING RING
(2 REQ.)



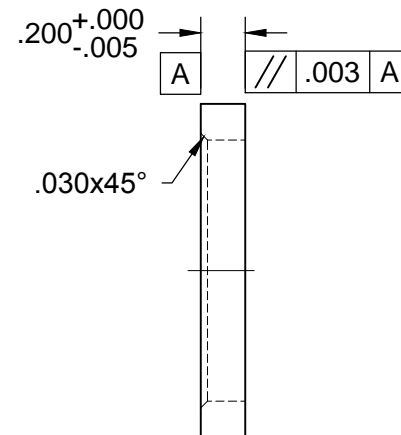
TOOL #	PILOT No.	BEARING		ØD ₁ +0.003 -0.008	ØD ₃ +0.005 -0.005	ØD ₄ +0.015 -0.000	MATERIAL		
		OD.	ID.						
1093-8-GT	-5013	1.0937	.5625	1.0170	1.203	1.344	4140	Q&T	Ø1-3/8 x 1/2
1125-8-GT	-5012	1.1250	.5000	1.0490	1.235	1.375	4140	Q&T	Ø1-3/8 x 1/2
1187-8-GT	-5012	1.1875	.5000	1.1115	1.297	1.437	4140	Q&T	Ø1-1/2 x 1/2
	-5013	1.1875	.5625	1.1115	1.297	1.437	4140	Q&T	Ø1-1/2 x 1/2
	-5014	1.1875	.6250	1.1115	1.297	1.437	4140	Q&T	Ø1-1/2 x 1/2
	-5017	1.1875	.7500	1.1115	1.297	1.437	4140	Q&T	Ø1-1/2 x 1/2
1250-8-GT	-5005	1.2500	.2500	1.1740	1.360	1.500	4140	Q&T	Ø1-1/2 x 1/2
	-5006	1.2500	.3125	1.1740	1.360	1.500	4140	Q&T	Ø1-1/2 x 1/2
	-5016	1.2500	.6250	1.1740	1.360	1.500	4140	Q&T	Ø1-1/2 x 1/2
1312-8-GT	-5011	1.3125	.4375	1.2360	1.423	1.562	4140	Q&T	Ø1-5/8 x 1/2
	-5014	1.3125	.6250	1.2360	1.423	1.562	4140	Q&T	Ø1-5/8 x 1/2
	-5015	1.3125	.8750	1.2360	1.423	1.562	4140	Q&T	Ø1-5/8 x 1/2
1375-8-GT	-5014	1.3750	.6250	1.2990	1.485	1.625	4140	Q&T	Ø1-5/8 x 1/2
	-5017	1.3750	.7500	1.2990	1.485	1.625	4140	Q&T	Ø1-5/8 x 1/2

- NOTES
1. ¹²⁵✓ SURFACE FINISH UNLESS OTHER WISE SPECIFIED.
 2. -5 HEIGHT IS .013 TO .014 LESS THAN -7 LENGTH.

RED BARN MACHINE	
TITLE 8 POINT STAKING TOOL; RETAINING RING	
DWG NO. RBST(TOOL# SEE CHART)-(PILOT# SEE CHART)-5	REV 1A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1	FRACTIONS ± 1/32 ANGLES ± 5°
DRAWN BY: PERRITT	
APPROVED	
HEAT TREAT FINISH BLACK OXIDE SPEC USED ON BEARING	
SEE CHART Pg. 1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 2-6-08 SHEET 4 of 6



(-3)
BACK-UP RING
(2 REQ.)

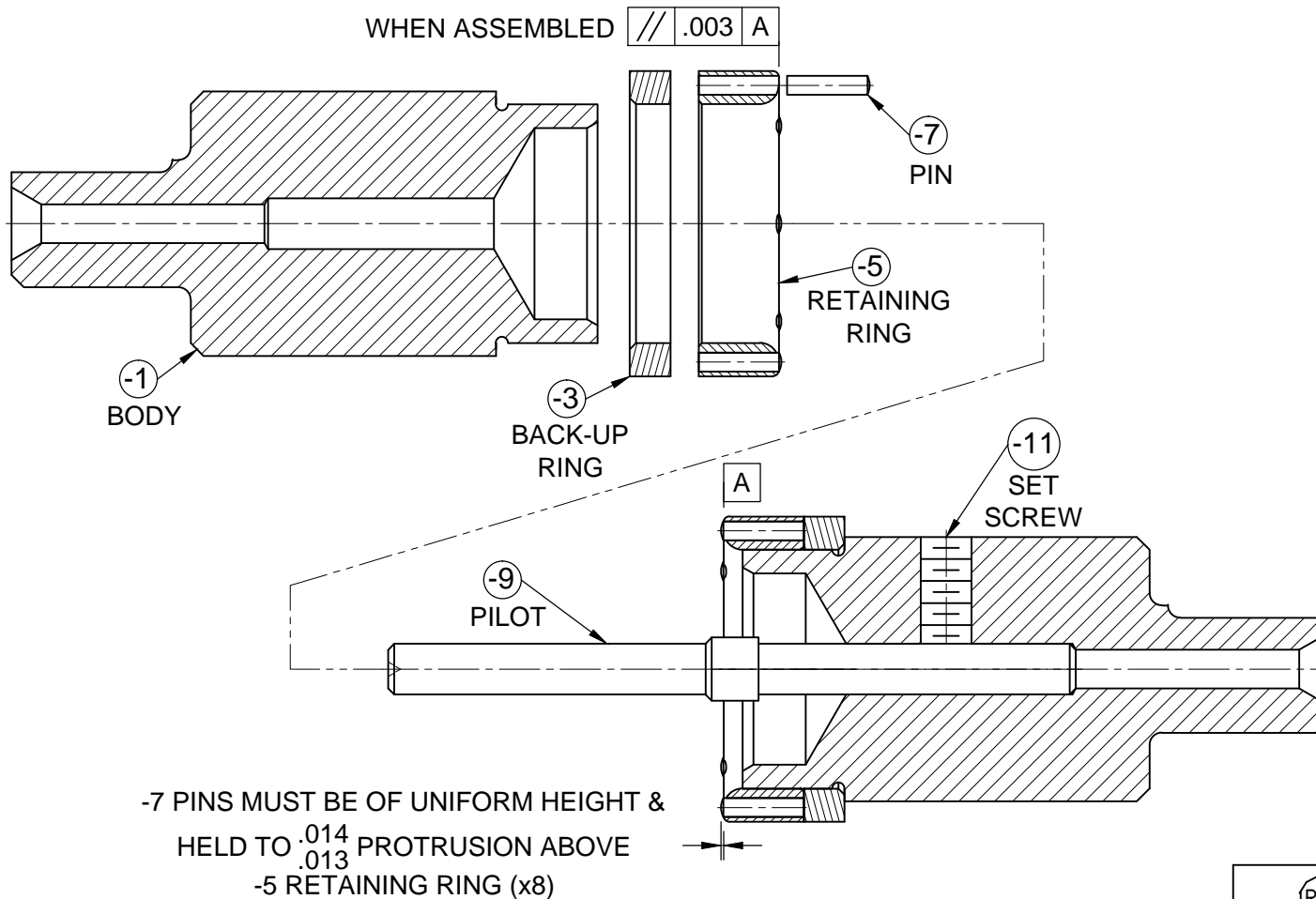


NOTES
1. $\sqrt{125}$ SURFACE FINISH UNLESS
OTHER WISE SPECIFIED.

TOOL #	PILOT No.	BEARING		$\varnothing D_1$ +0.003 -0.008	$\varnothing D_2$ +0.015 -0.000	MATERIAL
		OD.	ID.			
1093-8-GT	-5013	1.0937	.5625	1.0170	1.344	O-1 DRILL ROD $\varnothing 1-3/8 \times 3/8$
1125-8-GT	-5012	1.1250	.5000	1.0490	1.375	O-1 DRILL ROD $\varnothing 1-3/8 \times 3/8$
1187-8-GT	-5012	1.1875	.5000	1.1115	1.437	O-1 DRILL ROD $\varnothing 1-1/2 \times 3/8$
	-5013	1.1875	.5625	1.1115	1.437	O-1 DRILL ROD $\varnothing 1-1/2 \times 3/8$
	-5014	1.1875	.6250	1.1115	1.437	O-1 DRILL ROD $\varnothing 1-1/2 \times 3/8$
	-5017	1.1875	.7500	1.1115	1.437	O-1 DRILL ROD $\varnothing 1-1/2 \times 3/8$
1250-8-GT	-5005	1.2500	.2500	1.1740	1.500	O-1 DRILL ROD $\varnothing 1-1/2 \times 3/8$
	-5006	1.2500	.3125	1.1740	1.500	O-1 DRILL ROD $\varnothing 1-1/2 \times 3/8$
	-5016	1.2500	.6250	1.1740	1.500	O-1 DRILL ROD $\varnothing 1-1/2 \times 3/8$
1312-8-GT	-5011	1.3125	.4375	1.2360	1.562	O-1 DRILL ROD $\varnothing 1-5/8 \times 3/8$
	-5014	1.3125	.6250	1.2360	1.562	O-1 DRILL ROD $\varnothing 1-5/8 \times 3/8$
	-5015	1.3125	.8750	1.2360	1.562	O-1 DRILL ROD $\varnothing 1-5/8 \times 3/8$
1375-8-GT	-5014	1.3750	.6250	1.2990	1.625	O-1 DRILL ROD $\varnothing 1-5/8 \times 3/8$
	-5017	1.3750	.7500	1.2990	1.625	O-1 DRILL ROD $\varnothing 1-5/8 \times 3/8$

RED BARN MACHINE	
TITLE 8 POINT STAKING TOOL; BACK-UP RING	
DWG NO. RBST(TOOL# SEE CHART)-(PILOT# SEE CHART)-3	REV 1A
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX $\pm .005$.XX $\pm .01$.X $\pm .1$	FRACTIONS $\pm 1/32$ ANGLES $\pm 5^\circ$
DRAWN BY: PERRITT APPROVED	
HEAT TREAT RC. 60-63 FINISH BLACK OXIDE USED ON BEARING	
SEE CHART Pg. 1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 2-6-08 SHEET 3 of 6

REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	TOLERANCE CHANGES; D3 WAS -.003, D10 WAS ±.0005, D11 WAS -.001, H WAS +.001; -1 BODY REMOVED TOL. FROM Ø.625 & Ø.190. ALSO DELETED THE 1/4-20 THREADED HOLE FROM ONE -1 BODY & DELETED ONE -11 SET SCREW.	2-15-08	WP	DW
1A	CH'D T/N FROM KBST.	11/19/09	RJC	



TOOL No. CHART		
BEARING #	TOOL #	PILOT No.
LSS9, BHDN-9003	1093-8-GT	-5013
K8A, KF8A, KPA8	1125-8-GT	-5012
RBC-8	1187-8-GT	-5012
AT-9		-5013
BSR100000, HSB10, LSS10		-5014
B5539ZZ		-5017
AF4, A4, AB4	1250-8-GT	-5005
K5, KF5, KS5, KR5, D5, DS5, DF5, KP5		-5006
AT-10		-5016
AT75DA		-5011
RBC-10	1312-8-GT	-5014
B-540, TN-514		-5015
K10A, KF10A, KP10A	1375-8-GT	-5014
AT12-1, BSR12000-G, AT12		-5017

RED BARN MACHINE

TITLE		REV	
8 POINT STAKING TOOL; ASSEMBLY		1A	
DWG NO.		REV	
RBST(TOOL# SEE CHART)-(PILOT# SEE CHART)		1A	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY: PERRITT	
TOLERANCES ON:		APPROVED	
DECIMALS .XXX ± .005		HEAT TREAT LISTED PER ITEM	
XX ± .01		FINISH LISTED PER ITEM	
X ± .1		USED ON BEARING	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		SEE CHART Pg. 1	
SCALE	NTS	DATE	2-6-08
		SHEET	1 of 6

ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.
			-1	2	BODY	RND. BAR 4140 Q&T	SEE CHART	2
			-3	2	BACK-UP RING	DRILL ROD O-1	SEE CHART	3
			-5	2	RETAINING RING	RND. BAR 4140 Q&T	SEE CHART	4
		W/O	-7	16	PIN		SEE CHART	5
			-9	1	PILOT	RND. BAR 4140 Q&T	SEE CHART	6
		B/O	-11	1	SOCKET HEAD SET SCREW	BLACK	1/4-20 UNC x 1/4	N/S
ASSY #								

This drawing, specifications, and concepts contained here in are the sole property of Red Barn Machine, and may not be reproduced or used in any fashion without the prior written permission of Red Barn Machine.

REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
--	--	--	--	--

NOT APPROVED FOR PRODUCTION

[illegible]

NOT APPROVED FOR PRODUCTION

A large, light blue diagonal watermark reading "NOT APPROVED FOR PRODUCTION" spans the entire page. The text is in a bold, sans-serif font and is oriented from the bottom-left towards the top-right.

This drawing, specifications, and concepts contained here in are the sole property of Red Barn Machine, and may not be reproduced or used in any fashion without the prior written permission of Red Barn Machine.

REVISIONS									
REV	DESCRIPTION					DATE	INITIAL	APPROVE	
—	—						—	—	—

[illegible][illegible]